

Resin-modified Inorganic Phosphate Cement for Solid Freeform Fabrication

ABSTRACT

A method for solid free-form fabrication of a three-dimensional object includes depositing a particulate blend in a defined region, the particulate blend including radical source particulates, polyacid particulates, multivalent cation particulates, and a calcium phosphate source particulates, ink-jetting a liquid phase binder onto a predetermined area of the particulate blend to form hydrated cement in the predetermined area, wherein the liquid phase binder is acidic and includes reactive monomers, and hardening the hydrated cement.